

M/035/0009  
Incoming.  
Leslie Heppler <lheppler@utah.gov>

## August Monthly Clay Hollow Cleanup Update

Heaton, Trevor (RTKC) &lt;Trevor.Heaton@riotinto.com&gt;

Thu, Aug 18, 2016 at 5:13 PM

To: 'Paul Baker &lt;PAULBAKER@utah.gov&gt;

Cc: "Leslie Heppler (LHEPPLER@utah.gov)" <LHEPPLER@utah.gov>, "dhall@utah.gov" <dhall@utah.gov>, "bhamos@utah.gov" <bhamos@utah.gov>, "Douglas Bacon (DBACON@utah.gov)" <DBACON@utah.gov>, "rstonestreet@utah.gov" <rstonestreet@utah.gov>, "dng@utah.gov" <dng@utah.gov>, "Fiedler, Kerri (Fiedler.Kerri@epa.gov)" <Fiedler.Kerri@epa.gov>, "Wendell Rigby (wendellr@wjordan.com)" <wendellr@wjordan.com>, "jhoggan@slco.org" <jhoggan@slco.org>, Mike Bradley <mbradley@utah.gov>

Mr. Baker

Attached are the monthly update report and inspection sheets associated with the Clay Hollow Cleanup Project (7/2016-8/2016). No changes have occurred since the previous monthly report. The Clay Hollow Post-Removal Report was approved by DOGM in August 2015, however the review and approval by other participating agencies are still in process.

Attached to this email are the Clay Hollow Cleanup Tracking Sheet and the associated daily inspection logs. If you have any questions feel free to contact me.

Regards,

Trevor Heaton, P.E.

Senior Project Engineer

Rio Tinto Kennecott

4700 Daybreak Parkway, South Jordan UT 84095

T: (801) 563-1514 M: (801) 557-3192 F: (801) 569-6585

trevor.heaton@riotinto.com www.riotintokennecott.com

This email is confidential and may also be privileged. If you are not the intended recipient, please notify us immediately and delete this message from your system without first printing or copying it. Any personal data in this email (including any attachments) must be handled in accordance with the Rio Tinto Group Data Protection Policy and all applicable data protection laws.



Clay Hollow - August 2016.pdf  
192K

RECEIVED E-Mail

AUG 18 2016

Div. of Oil, Gas &amp; Mining



Table 1 Cleanup Response Activities

ID	Work Area	Activity	Planned Target		Status	Comments
			Start	Finish		
1A	Segment 1	Additional sampling on the West Jordan property	4/1/2014	5/16/2014	Complete	The distribution of mine waste sediment shall be based on visual observation, XRF analysis of soils for arsenic and lead, and laboratory analysis on select confirmation samples for arsenic and lead.
1B	Segment 1	Draft a Characterization/Removal work plan	4/1/2014	4/17/2014	Complete	Plan provided as dictated in the DOGM Division Directive
1C	Segment 1	Site visit with DWQ, DOGM and DERR	4/9/2014			Allow regulators an opportunity to see the site in person and ask questions.
1D	Segment 1	Regulatory review of Cleanup Plan - Segment 1	4/18/2014	4/30/2014	Complete	Submission of joint review between the three agencies
1E	Segment 1	Obtain comments from DOGM, DWQ and DERR	4/22/2014	4/30/2014	Complete	Obtain comments from the agencies on Cleanup plan
1F	Segment 1	Revise work plan and address Agencies comments	4/22/2014	5/14/2014	Complete	Resubmittal for joint review between the three agencies
1G	Segment 1	Obtain Regulatory approval of Cleanup Plan - Segment 1	4/21/2014	7/3/2014	Complete	Regulatory approval of recommended action levels for arsenic, excavation and removal of material, transportation of material, final deposition of removed material, and restoration of the drainage.
2A	Segment 1	Increase desilting capacity at the Kennecott property line	7/7/2014	7/8/2014	Complete	Initial step is to prevent additional mine waste sediment from migrating off Rio Tinto property.
2B	Segment 1	Remove sediments from - Segment 1	7/9/2014	7/15/2014	Complete	The removal of mine waste sediment will commence just downstream of the desilting basins that are to be constructed. From this point the removal will continue downstream to the property line, thus preventing further migration of mine waste sediment off of Rio Tinto property.
1F	Segments 2-4	Submission of Cleanup plan for - Segments 2 - 4	7/18/2014	11/20/2014	Complete	Plan provided as dictated in the DOGM Division Directive.
2C	Segment 1	Reconstruct riprapped channel in - Segment 1	9/15/2014	9/23/2014	Complete	Replacement of riprap material will be further protect the stream bottom from erosion and restore the site to its previous condition.
1G	Segments 2-4	Obtain Regulatory approval of work plan	12/19/2014	12/19/2014	Complete	Regulatory approval of recommended action levels for arsenic, excavation and removal of material, transportation of material, final deposition of removed material, and restoration of the drainage.
2D	Segment 1	Reseed impacted areas in - Segment 1	9/23/2014	9/23/2014	Complete	Revegetating immediately downstream of the desilting basins will minimize offsite migration of fines during a storm event.
3A	Segments 2-4	Remove sediments from - Segments 2-4	7/21/2014	9/11/2014	Complete	Removal of sediments found upstream of the desilting basins will minimize the loading and the maintenance of the basins.
3B	Segments 2-4	Reconstruct drainage channel - Segments 2-4	7/28/2014	11/26/2014	Complete	Regrading of the disturbed area will allow for natural water flow and will be done concurrent with removal.
3C	Segments 2-4	Reseed impacted areas in - Segments 2-4	11/18/2014	11/26/2014	Complete	Revegetation of the drainage found upstream of the desilting basins will minimize the loading and the maintenance of the basins.
4A	Segments 1-4	Submit post removal report	11/27/2014	2/6/2015	Complete	Detailed report giving removal quantities as well as the test results of the cleaned surface. - This work is in process and progressing on time.
4B	Segments 1-4	Obtain Regulatory approval of post removal report	2/6/2015		In Process	Regulatory approval of the post removal report
4C	Segments 1-4	Inspect leach pads and stormwater controls daily until permanent controls are installed	4/1/2014		In Process	Includes daily inspection of all five leach pads and the associated stormwater controls until approval is obtained to decrease the frequency

Projected dates

\* Monthly project updates will be provided on the 15th of each month, until the cleanup is complete. If Barneys deviates from the attached schedule, Barneys and Agencies will discuss any needed action at the agencies request.

RECEIVED E-Mail

AUG 18 2016

Div. of Oil, Gas &amp; Mining



## Barneys Canyon Heap Pad and Drainage Inspection

Month: July 2016

Date	BC1	BC2	BC3	BC4	BC5	North Perimeter	South Perimeter	East/B&G Perimeter	Inspector	Comments/Corrective Actions
1	1	1	1	1	1	1	1	1	TN	Site Stable
2	-	-	-	-	-	-	-	-	-	Weekend - No inspection
3	-	-	-	-	-	-	-	-	-	Weekend - No inspection
4	-	-	-	-	-	-	-	-	-	Holiday - No inspection
5	1	1	1	1	1	1	1	1	TN	Site Stable
6	1	1	1	1	1	1	1	1	SH	Site Stable
7	1	1	1	1	1	1	1	1	SH	Site Stable
8	1	1	1	1	1	1	1	1	TN	Site Stable
9	-	-	-	-	-	-	-	-	-	Weekend - No inspection
10	-	-	-	-	-	-	-	-	-	Weekend - No inspection
11	1	1	1	1	1	1	1	1	SH	Site Stable
12	1	1	1	1	1	1	1	1	TN	Site Stable
13	1	1	1	1	1	1	1	1	SH	Site Stable
14	1	1	1	1	1	1	1	1	SH	Site Stable
15	1	1	1	1	1	1	1	1	TN	Site Stable
16	-	-	-	-	-	-	-	-	-	Weekend - No inspection
17	-	-	-	-	-	-	-	-	-	Weekend - No inspection
18	1	1	1	1	1	1	1	1	TN	Site Stable
19	1	1	1	1	1	1	1	1	SH	Site Stable
20	1	1	1	1	1	1	1	1	TN	Site Stable
21	1	1	1	1	1	1	1	1	SH	Site Stable
22	1	1	1	1	1	1	1	1	TN	Site Stable
23	-	-	-	-	-	-	-	-	-	Weekend - no inspection
24	-	-	-	-	-	-	-	-	-	Weekend - no inspection
25	1	1	1	1	1	1	1	1	TN	Site Stable
26	1	1	1	1	1	1	1	1	SH	Site Stable
27	1	1	1	1	1	1	1	1	SH	Site Stable
28	1	1	1	1	1	1	1	1	SH	Site Stable
29	1	1	1	1	1	1	1	1	TN	Site Stable
30	-	-	-	-	-	-	-	-	-	Weekend - No inspection
31	-	-	-	-	-	-	-	-	-	Weekend - No inspection

## Heap Leach Pads (BC1 thru BC5):

- 1 No heap material or liquids flowing off the lined pad
- 2 Heap material flowing off the lined pad
- 3 Liquids flowing off the lined pad

## Perimeter Drainage:

- 1 Perimeter drainage in good order and containment of storm water behind permitted dams
- 2 Uncontained perimeter drainage
- 3 Moderate to significant erosion to perimeters

## Barneys Canyon Storm Impact Response Plan (SIRP)

Text and emails will be automatically pushed from the MSI met station to Nannini, Evans and Bradt if any of the following conditions are triggered;

- > 0.25 inches of precipitation in 15 minutes
- > 0.50 inches of precipitation in 60 minutes

If an alert is triggered, a site inspection will be initiated as soon as safely possible.

Notify Trevor Heaton of alert and inspection findings via email. Document the inspection and any findings in the table below.

If inspection finds loss or imminent loss of containment, notification of Environmental Manager and Water Quality Principle will be made as well as a request for resources.

SIRP triggered Inspection Summary (include date, time, trigger condition and findings)

RECEIVED E-Mail

AUG 18 2016

Div. of Oil, Gas & Mining



Barneys Canyon Heap Pad and Drainage Inspection

Month: August 2016

Date	BC1	BC2	BC3	BC4	BC5	North Perimeter	South Perimeter	East/B&G Perimeter	Inspector	Comments/Corrective Actions
1	1	1	1	1	1	1	1	1	TN	Site Stable
2	1	1	1	1	1	1	1	1	SH	Site Stable
3	1	1	1	1	1	1	1	1	SH	site stable
4	1	1	1	1	1	1	1	1	SH	site stable
5	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—		
7	—	—	—	—	—	—	—	—		
8	1	1	1	1	1	1	1	1	SH	site stable
9	1	1	1	1	1	1	1	1	SH	site stable
10	1	1	1	1	1	1	1	1	SH	site stable
11	1	1	1	1	1	1	1	1	SH	site stable
12	—	—	—	—	—	—	—	—		
13	—	—	—	—	—	—	—	—		
14	—	—	—	—	—	—	—	—		
15	1	1	1	1	1	1	1	1	SH	site stable
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

Heap Leach Pads (BC1 thru BC5):

- 1 No heap material or liquids flowing off the lined pad
- 2 Heap material flowing off the lined pad
- 3 Liquids flowing off the lined pad

Perimeter Drainage:

- 1 Perimeter drainage in good order and containment of storm water behind permitted dams
- 2 Uncontained perimeter drainage
- 3 Moderate to significant erosion to perimeters

Barneys Canyon Storm Impact Response Plan (SIRP)

Text and emails will be automatically pushed from the MSI met station to Nannini, Evans and Bradt if any of the following conditions are triggered;  
 > 0.25 inches of precipitation in 15 minutes  
 > 0.50 inches of precipitation in 60 minutes

If an alert is triggered, a site inspection will be initiated as soon as safely possible.

Notify Trevor Heaton of alert and inspection findings via email. Document the inspection and any findings in the table below.

If inspection finds loss or imminent loss of containment, notification of Environmental Manager and Water Quality Principle will be made as well as a request for resources.

<b>SIRP triggered Inspection Summary (include date, time, trigger condition and findings)</b>

RECEIVED E-Mail

AUG 10 2016

Div. of Oil, Gas & Mining